the latter applied in a greater Number in vain, even when the Symptoms were not ſo ſeemingly deſperate as in the Caſe before you.

He took near one hundred and five Grains of Musk in about thirty Hours; but I can't ſay he either ſlept or perſpired more than ordinary upon it.

XVI. *Part of a Letter from the Rev. Dr.* Miles, *F.R.S. to Mr.* Henry Baker, *F.R.S. concerning* Electrical Fire.

Dear Sir,

Read Feb. 20. 1745-6. YOU query, Whether that ſubtil Fire which kindles warm'd Spirit of Wine, be reſident in the Body from which it evidently iſſues, and be kindled occaſionally? or, Whether it comes from the excited Tube pervading inſtantaneouſly the Body it is applied to? or, laſtly, whether there are certain Principles in the Air, which are thus agitated into an extemporaneous Lightning? Theſe Queries are certainly very comprehenſive acd important; I wiſh I were able to return you ſomewhat more ſatisfactory than Suppoſitions.

I incline to think the electrical and luminous *Effluvia* to be the ſame, and not diſtinct Subſtances. Mr. *Hauksbee* ſeems to diſtinguiſh them, intimating, that no luminous Matter would be communicated from an excited Cylinder of Wax to his Finger, when brought near to the Cylinder, though it attracted light Bodies; but it is to be obſerved, that this Cylinder

linder of Wax was only a Coat of Wax, of about half an Inch thick, on a wooden Cylinder of four Inches Diameter: Now I have always found my Stick of Wax, which conſiſts of nothing elſe, to emit luminous *Effluvia* very plentifully, and rather in a greater Degree than the glaſs Tube.

If we conclude with the *Engliſh* Philoſophers, that Fire is mechanically producible from other Bodies, by Colliſion, Attrition, *&c.* or, according to Sir *Iſaac Newton,* by putting the ſulphureous Particles of Bodies into a very ſtrong vibratory Motion; by which means they become hot and lucid, *i. e.* affect us with Ideas of Light and Heat; on this Suppoſition may we not conclude, that the Action on the glaſs Tube, when it is rubb'd, by putting the Parts of it into ſuch a Vibration, and, conſequently, agitating violently the ſulphureous Particles therein, may heat and kindle them? And may it not alſo be ſuppoſed, that when the Air is in a due State, nitrous or other Particles in the Air may contribute to the kindling them? Or perhaps, rather that ſubtil, active, elaſtic Subſtance, which Sir *Iſaac Newton* ſuppoſes to be the Cauſe of the Refraction, &c. of Light, and which communicates Heat to Bodies, and is univerſally diffuſed? Theſe *Effluvia,* being thus agitated and convey'd by a non electric Body intervening, in a due Quantity, to the Vapour of the warmed Spirit, may be ſuppoſed to kindle them, without exciting any originally-reſident Fire in the Body immediately communicating with them; the luminous *Effluvia* from the Finger, or Ice, *&c.* when brought near the inflammable Body, being, as far as we can perceive, of the very ſame kind with thoſe which proceed from the Tube; or there is nothing appearing in them which may lead us to ſuſpect they are not the very ſame, tho' in a greater Quantity than what can come from the Part of the Tube you approach with the End of your Finger.

If we conclude with ſome of the foreign Philoſophers, *Boerhaave*, *Homberg*, *Lemery*, *s' Graveſand*, &c. that Fire is equally diffuſed throughout the Univerſe by the Creator, pervading the Interſtices of all Bodies, and that there is no Fire mechanically produc'd *de novo*; then, may we not conclude, that whereas, by Attrition of the glaſs Tube, there is produced a very quick and ſtrong Vibration of its Parts, which muſt neceſſarily affect the Fire contain'd in the Vacuities, by Compreſſion and Relaxation; ſo that, as *Boerhaave* expreſſes it, there muſt be, in the Bodies thus agitated, and in the Fire contain'd in its Pores, an exceeding great Motion excited, and, together herewith, the ſurrounding Fire, from both theſe Cauſes, muſt be agitated, and ſo much the more violently, the nearer it is; May we not conclude, that its Force will be hereby ſufficiently increaſed to kindle the Spirit to which it is convey'd?

In this, as in the former Hypotheſis, I would not exclude the elaſtic *Materia ſubtilis* from being ſuppoſed the having an Influence on the *Effluvia*. Whichſoever of the two *Hypotheſes* we embrace, you may perceive, that I incline to think, that the kindling Fire rather proceeds from the excited Tube, I am very ſenſible I am in a great meaſure groping in the dark; but hope future Experiments will caſt a Light on this obſcure Subject. I am, with very great Reſpect,

Dear Sir,

Tooting, Feb. 15. 1745-6.

Your faithful Friend,

and obliged humble Servant,

H. Miles.

XVII. *An Account of a Book intituled,* De quamplurimis Phoſphoris nunc primum detectis Commentarius. *Auctore* Jac. Barthol. Beccario. *Printed in* 4to. *at* Bolognia, 1744. *Extracted and tranſlated from the* Latin *by* W. Watſon, *F. R. S.*

Read Feb. 27. 1745-6.

THE ingenious Author, in the Work before us, does not treat expreſly of thoſe Productions of the chemical Art, which we uſually call *Phoſphori*, but principally of ſuch Subſtances, whether natural or artificial, which imbibe the Rays of Light in ſuch Quantities, and in ſuch a Manner, as to appear luminous for a Time, even in abſolute Darkneſs.

Before I enter upon the Subject Matter of this Treatiſe, I muſt take notice of the *Apparatus* made uſe of in theſe Inquiries. Our Author cauſed a wooden Box to be made, large enough either to ſit in, or ſtand in upright; yet not ſo large but he might with Eaſe be carried to any Place the moſt convenient